

I claim:

1. An end protector link for capturing and retaining first and second elongate link pins of a multi-link conveyor chain, comprising:
  - (a) an outer wall defining a protective bearing surface;
  - (b) an inner wall carried in spaced-apart relation to the outer wall and having a retainer aperture for capturing and retaining respective enlarged heads of the first and second link pins between facing surfaces of the outer wall and the inner wall; and
  - (c) the protective bearing surface of the outer wall adapted for being engaged by wearing surfaces past which the conveyor moves and protecting the enlarged heads of the link pins to exposure to said wearing surfaces.
2. An end protector link according to claim 1, wherein the spacer wall is normal to the inner wall and the outer wall, and the inner wall and outer wall reside in spaced-apart parallel planes relative to each other.
3. An end protector link according to claim 1, wherein the inner wall includes an opening sized to allow the link pin but not the enlarged head of the link pin to pass therethrough when the link pin is in an operative position within the link.
4. An end protector link according to claim 1, wherein opposing side edges of the inner and outer walls taper towards each other in a direction away from the spacer wall.

5. An end protector link according to claim 1, wherein the inner wall and outer wall are carried in spaced-apart relation by an intermediate spacer wall.
6. An end protector link according to claim 1, wherein the retainer aperture comprises a single opening in the inner wall adapted for receiving the first and second link pins.
7. An end protector link according to claim 1, wherein the retainer aperture comprises a single opening in the inner wall adapted for receiving the first and second link pins, the retainer aperture having a centrally-disposed opening sufficiently large to successively receive the enlarged heads of the first and second link pins, and first and second laterally-disposed openings on opposite sides of the centrally-disposed opening, each of the first and second laterally-disposed openings being sufficiently small to retain the enlarged heads of the link pins between the facing surfaces of the outer wall and the inner wall.
8. An end protector link according to claim 1, and including:
  - (a) a spacer wall comprising first and second spacer wall segments carried by opposed side edges of the outer wall, and wherein:
  - (b) the inner wall comprises first and second inner wall segments carried by respective first and second spacer wall segments, the first and second inner wall

segments being mutually opposed in a single plane and defining therebetween the retainer aperture for receiving the link pins therethrough.

9. An end protector link according to claim 8, wherein the first and second inner wall segments each include an opposed, inwardly facing recess sufficiently small to retain the enlarged heads of the link pins between the facing surfaces of the outer wall and the inner wall.

10. An end protector link according to claim 1, and including:

(a) a spacer wall comprising a wall segment carried by one side edge of the outer wall and a corresponding, opposed side edge of the inner wall; and wherein:

(b) the retainer aperture comprises first and second opposed, outwardly-facing recesses formed in the inner wall and sufficiently small to retain the enlarged heads of the link pins between the facing surfaces of the outer wall and the inner wall.

11. An end protector link according to claim 1, and including:

(a) a spacer wall comprising a wall segment carried by one side edge of the outer wall and a corresponding, opposed side edge of the inner wall; and wherein:

(b) the retainer aperture comprises recesses formed in the inner wall, including first and second opposed, outwardly-facing recesses sufficiently small to retain the enlarged heads of the link pins between the facing surfaces of the outer wall and the inner wall, each outwardly-facing recess having:

- (i) a first, elongate segment for receiving the diameter of the link pin therethrough; and
- (ii) a second, rounded segment positioned to retain the captured enlarged head in alignment therewith.

12. An end protector link according to claim 11, wherein the respective side edges of the inner and outer walls remote from the spacer wall are tapered to define obliquely-opposed bearing surfaces.

13. An end protector link according to claim 1, wherein the retainer aperture includes first and second elongate, parallel recesses sufficiently small to retain respective enlarged heads of the link pins between the facing surfaces of the outer wall and the inner wall, each outwardly-facing recess having:

- (i) a first, elongate segment communicating with a side edge of the inner wall for receiving the diameter of the link pin therethrough; and
- (ii) a second, rounded segment positioned adjacent to the spacer wall to retain the captured enlarged head in alignment therewith.

14. A multi-link conveyor chain according to claim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 or 13, and including a plurality of conveyor links interconnected in a lengthwise direction and a widthwise direction by a plurality of pairs of the link pins to form a conveyor

having a horizontal supporting surface for transporting successive items downstream in a processing line by engagement with a driving element.

15. A method of protecting capturing and retaining first and second elongate link pins of a multi-link conveyor chain, comprising the steps of:

(a) providing an end protector link, comprising:

(i) an outer wall defining a protective bearing surface;

(ii) an inner wall carried in spaced-apart relation to the outer wall and

having a retainer aperture for capturing and retaining respective enlarged heads of the first and second link pins between facing surfaces of the outer wall and the inner wall; and

(iv) the protective bearing surface of the outer wall adapted for being engaged by wearing surfaces past which the conveyor moves and protecting the enlarged heads of the link pins to exposure to said wearing surfaces;

(b) positioning the respective enlarged heads of the first and second link pins between the facing surfaces of the outer wall and the inner wall; and

(c) manipulating the end protector link to retain the respective enlarged heads of the first and second link pins between the facing surfaces of the outer wall and the inner wall.

16. A method according to claim 15, wherein the step of manipulating the end protector link comprises the step of connecting the end protector link to a plurality of conveyor links by means of the link pins whereby the link pins are locked in spaced relation to each other and to the conveyor links.

17. A method according to claim 15, wherein the step of manipulating the end protector link comprises the step of bending the outer wall from an initial outwardly-extending oblique link pin loading position to a link pin locking position wherein the plane of the outer wall is parallel to the plane of the inner wall with the heads of the link pins captured therebetween.

18. A method according to claim 15, wherein the step of manipulating the end protector link comprises the step of bending two opposed segments of the outer wall from respective, initial outwardly-extending oblique link pin loading positions to respective link pin locking positions wherein the plane of the first and second outer wall segments are parallel to the plane of the inner wall with the head of a respective link pin captured by a respective one of the first and second outer wall segments.

19. An end protector link for capturing and retaining first and second elongate link pins of a multi-link conveyor chain, comprising:

- (a) an outer wall defining a protective bearing surface;
- (b) an inner wall carried in spaced-apart relation to the outer wall and having a retainer aperture for capturing and retaining respective enlarged heads of the first and second link pins between facing surfaces of the outer wall and the inner wall; and
- (c) the protective bearing surface of the outer wall adapted for being engaged by wearing surfaces past which the conveyor moves and protecting the enlarged heads of the link pins to exposure to said wearing surfaces.

A method according to claim 15, wherein the step of manipulating the end protector link comprises the step of bending two opposed segments of the inner wall from respective,

initial inwardly-extending oblique link pin loading positions to respective link pin locking positions wherein the plane of the first and second inner wall segments are parallel to the plane of the outer wall with the head of a respective link pin captured by a respective one of the first and second inner wall segments.

20. An end protector link for capturing and retaining first and second elongate link pins of a multi-link conveyor chain, comprising:

- (a) an outer wall defining a protective bearing surface;
- (b) an inner wall carried in spaced-apart relation to the outer wall and having a retainer aperture for capturing and retaining respective enlarged heads of the first and second link pins between facing surfaces of the outer wall and the inner wall;
- (c) the protective bearing surface of the outer wall adapted for being engaged by wearing surfaces past which the conveyor moves and protecting the enlarged heads of the link pins to exposure to said wearing surfaces; and
- (d) the inner wall and the upper wall defining therebetween an upper surface adapted for being laterally aligned with an upper surface of the conveyor chain to facilitate lateral movement of conveyed items from the conveyor chain to an adjacent support.